INDEX TO VOLUME XLIV, 1950

A

Aquilae from Lines of Different Chromospheric Levels, Radial-velocity Curves for Eta, *T. S. Jacobsen*, 104.
Apgar, Mr. Charles E., Obituary, 247.
Asteroid Orbits, Kirkwood's Gaps in, 163.
Astronomical League Convention, 85.
Astronomical Observations a Century Ago, 31.
Atmospheres of the Early Type Stars, The, *C. S. Beals*, 221.

B

Babbage, Charles, and the Calculating Machine, 79.
Baglow, R. L. (see Review of Publications).
Beals, C. S., The Atmospheres of the Early Type Stars, 221.

C

Calculating Machine, Charles Babbage and the, 79.
Cameras, A Mount with Chopping Shutters for Meteor, *E. L. R. Webb*, 110.
Chant, C. A. (see Notes and Queries and Review of Publications) Chant Medal Presentation, 57.
Chubb Crater, Ungava, Quebec, *V. B. Meen*, 169.
Computation, The Romance of, 86.
Concerning the Source of Galactic Radio Noise, *Ralph E. Williamson*, 12.
Constellations, The, 196.
Crater, Ungava, Quebec, Chubb, *V. B. Meen*, 169.

D

Dalton, F. K., Microhardness Testing of Iron Meteorites, 1, 185.
David Dunlap Observatory, Communications, No. 23, *Williamson*, 12; No. 24, *Oke*, 135; No. 25, *Halliday*, 149.
Dedication of the "Brydon" Telescope, *Eluned Williams*, 181.
Dominion Astrophysical Observatory, Contributions, No. 22, *Jacobsen*, 104.
Dominion Observatory, Contributions, Vol. 2, No. 8, *Millman*, 209.

F

Federer, Jr., Charles A. (see Notes and Queries).

G

Galactic Radio Noise, Concerning the Source of, *Ralph E. Williamson*, 12.

H

H.D. 218393, The Variable Spectrum of the Star, *Ian Halliday*, 149.
Halliday, Ian, The Variable Spectrum of the Star H.D. 218393, 149.
Heard, J. F. (see Review of Publications).
Hertzsprung-Russell Diagram for Red Dwarf Stars, A Theoretical, *J. B. Oke*, 135.
Hogg, F. S. (see Notes and Queries and Review of Publications).
Hogg, Helen Sawyer, Honour for, 36; (see also Out of Old Books).
Hossack, W. R. (see Review of Publications).

J

Jacobsen, T. S., Radial-velocity Curves for Eta Aquilae from Lines of Different Chromospheric Levels, 104.

K

Kirkwood's Gaps in Asteroid Orbits, 163.

L

Lectures before the Society:
EDMONTON CENTRE—Binary Stars, *E. Phibbs*, 88; Solar Research, *E. H. Gowan*, 167; The Engineer and Astronomy, *J. A. Harle*, 167; Orbital Motion, *H. Jordan*, 168; Solar and Cosmic Radio Noise, *J. J. Gillis*, 204; Time Finders and Time Keepers, *L. E. Gads*, 204; Navigation, *W. A. Hockney*, 205; The Scale of the Universe, *J. W. Campbell*, 206.
OTTAWA CENTRE—Down Under in New Zealand, *Ernest A. Hodgson*, 207; The Origin of the Solar System, *J. A. Rottenberg*, 208; Some Canadian Contributions to Physics, *Leslie E. Howlett*, 208; The Cyclotron, *J. S. Foster*, 248; Visual Meteor Observing, *F. W. Matley*, 248; Fireballs, *Stanley Mott*, 248; Meteorites, *T. L. Tanton*, 248; Meteor Craters, *D. A. MacLulich*, 248.
SASKATOON CENTRE — Interstellar Dust and Gas, *Wm. Petrie*, 87; A Trip Through the Universe, *G. R. Small*, 87; Solar Prominences, *Wm. Petrie*, 88.
TORONTO CENTRE—Exploring the Atmosphere of the Sun and Earth, *Leo Goldberg*, 39; The Trials of Galileo, *A. R. Clute*, 40; Earth, the Water Planet, *Tuzo Wilson*, 126; Determining the True Meridian, *Gordon Hepburn*, 128; Storms on Stars, *Martin Schwarzschild;* 249; An Advance Look at the Spring Sky, *F. L. Troyer*, 250; The Seasons and Why They Occur, *Ian Halliday*, 250; The Earth as an Astronomical Body, *J. F. Heard*, 250; Where the Dip Needle Stands on End, *John Galt*, 253.
VICTORIA CENTRE—The Nature of Proof, *R. Wallace*, 206; Astronomy in Post-War Europe, *Anne Underhill*, 207; The Detection of Radioactive Ores, *Ian Williams*, 207.

M

McKinley, D. W. R., Measurement of the Velocity of Light using Quartz Crystals, 89.
Measurement of the Velocity of Light Using Quartz Crystals, *D. W. R. McKinley*, 89.
Meen, V. B., Chubb Crater, Ungava, Quebec, 169.
Meteor Cameras, A Mount with Chopping Shutters for, *E. L. R. Webb*, 110.
Meteoric Ionization, *Peter M. Millman*, 209.
Meteorites, Microhardness Testing of Iron, *F. K. Dalton*, 1, 185.
Microhardness Testing of Iron Meteorites, *F. K. Dalton*, 1, 185.
Millman, Peter M., Meteoric Ionization, 209.
Mount with Chopping Shutters for Meteor Cameras, A, *E. L. R. Webb*, 110.

N

Notes and Queries, 36, 85, 124, 247.
Notes on the Classification of Stellar Spectra, *K. O. Wright*, 129.

O

Obituary: Mr. Charles E. Apgar, 247.

Oke, J. B., A Theoretical Hertzsprung-Russell Diagram for Red Dwarf Stars, 135.

Out of Old Books, 31, 79, 123, 163, 196, 241.

Q

Quartz Crystals, Measurement of the Velocity of Light using, *D. W. R. McKinley*, 89.

R

Radial-velocity Curves for Eta Aquilae from Lines of Different Chromospheric Levels, *T. S. Jacobsen*, 104.

Radio Noise, Concerning the Source of Galactic, *Ralph E. Williamson*, 12.

Review of Publications:

Astronomisches Rechen - Institut, Astronomischer Jahresbericht, *F.S.H.*, 118.

Baker, Robert H., Astronomy, *C.A.C.*, 120.

Becker, Wilhelm, Sterne und Stersysteme, *W. R. Hossack*, 246.

Doig, Peter, A Concise History of Astronomy, *J.F.H.*, 158.

Einstein, Albert, Out of My Later Years, *C.A.C.*, 121.

Gaynor, Frank, Pocket Encyclopedia of Atomic Energy, *F.S.H.*, 161.

H.M. Nautical Almanac Office, The Star Almanac for Land Surveyors for the Year 1951, *J.F.H.*, 203.

Kaiser, Hans K., Kleine Raketenkünde, *J.F.H.*, 160.

Slouka, Hubert, Pohledy Do Nebe —"A look into the Heavens", *C.A.C.*, 121.

Vaucouleurs, Gerard, The Planet Mars, *F.S.H.*, 202.

Velikovsky, Immanuel, Worlds in Collision, *R.L.B.*, 118.

Royal Astronomical Society of Canada, Annual Meeting, 52.

S

Solar Eclipse Party, 1952, 86.

Spectra, Notes on the Classification of Stellar, *K. O. Wright*, 129.

Spectrum of the Star H.D. 218393, The Variable, *Ian Halliday*, 149.

Stars, The Atmospheres of the Early Type, *C. S. Beals*, 221.

Stars—Giants and Dwarfs, *K. O. Wright*, 17.

Stars, A Theoretical Hertzsprung-Russell Diagram for Red Dwarf, *J. B. Oke*, 135.

Sun, Blue, 241.

T

Telescope, Dedication of the "Brydon", *Eluned Williams*, 181.

Telescope for a New Project, A New, 37.

Theoretical Hertzsprung-Russell Diagram for Red Dwarf Stars, A, *J. B. Oke*, 135.

Thomson, Andrew, The Unknown Country, 41.

Tycho Brahe's Great Globe, 124.

U

Ungava, Quebec, Chubb Crater, *V. B. Meen*, 169.

Unknown Country, The, *Andrew Thomson*, 41.

V

Variable Spectrum of the Star H.D. 218393, The, *Ian Halliday*, 149.
Velocity of Light using Quartz Crystals, Measurement of the, *D. W. R. McKinley*, 89.

W

Wales's Observations in 1769, A Manuscript of, 123.
Webb, E. L. R., A Mount with Chopping Shutters for Meteor Cameras, 110.
Williams, Eluned, Dedication of the "Brydon" Telescope, 181.
Williamson, Ralph E., Concerning the Source of Galactic Radio Noise, 12.
Wright, K. O., Notes on the Classification of Stellar Spectra, 129; Stars—Giants and Dwarfs, 17.

THE JOURNAL
OF
THE ROYAL ASTRONOMICAL SOCIETY OF CANADA

DEVOTED TO THE ADVANCEMENT OF ASTRONOMY AND ALLIED SCIENCES

EDITOR, C. A. CHANT ASSISTANT EDITOR, F. S. HOGG

David Dunlap Observatory
Richmond Hill P.O., Ont.

ASSOCIATE EDITORS:

C. S. BEALS
Dominion Astronomer
Ottawa

J. A. PEARCE
Dominion Astrophysicist
Victoria, B.C.

A. THOMSON
Controller of the Meteorological Service of Canada, Toronto

PUBLISHED BI-MONTHLY
(*Six numbers per year*)

VOLUME XLIV, 1950

PRINTED FOR THE SOCIETY
TORONTO: 3 WILLCOCKS ST.

THE UNIVERSITY OF TORONTO PRESS

CONTENTS FOR VOLUME XLIV, 1950

I. JANUARY-FEBRUARY

		PAGE
Microhardness Testing of Iron Meteorites (with Plates I and II)	*F. K. Dalton*	1
Concerning the Source of Galactic Radio Noise	*Ralph E. Williamson*	12
Stars—Giants and Dwarfs	*K. O. Wright*	17
Out of Old Books (Astronomical Observatories a Century Ago)	*Helen Sawyer Hogg*	31
Notes and Queries (Honour for Dr. Helen Sawyer Hogg: *C.A.C.;* A New Telescope for a New Project: *F.S.H.*)		36
Meetings of the Society—Toronto		39

II. MARCH-APRIL

The Unknown Country	*Andrew Thomson*	41
Annual General Meeting of the Royal Astronomical Society of Canada: Reports of the Recorder, General Secretary, Librarian; Chant Medal Presentation; Reports of Secretaries of the Centres, General Treasurer, Treasurers of the Centres; Officers for 1950		52
Out of Old Books (Charles Babbage and the Calculating Machine)	*Helen Sawyer Hogg*	79
Notes and Queries (Astronomical League Convention: *Charles A. Federer, Jr.;* The Romance of Computation: *C.A.C.;* Solar Eclipse Party, 1952)		85
Meetings of the Society—Ottawa, Saskatoon, Edmonton		87

III. MAY-JUNE

Measurement of the Velocity of Light using Quartz Crystals	*D. W. R. McKinley*	89
Radial-velocity Curves for Eta Aquilae from Lines of Different Chromospheric Levels	*T. S. Jacobsen*	104
A Mount with Chopping Shutters for Meteor Cameras	*E. L. R. Webb*	110
Review of Publications (*Astronomischer Jahresbericht,* ed. by Astronomisches Rechen-Institut: *F.S.H.; Worlds in Collision* by Immanuel Velikovsky: *R.L.B.; Astronomy* by Robert H. Baker; *Out of My Later Years* by Albert Einstein; *Pohledy Do Nebe*—"A look into the Heavens" by Hubert Slouka: *C.A.C.*)		118
Out of Old Books (A Manuscript of Wales's Observations in 1769)	*Helen Sawyer Hogg*	123
Notes and Queries (Tycho Brahe's Great Globe: *C.A.C.*)		124
Meetings of the Society—Guelph, Toronto		126

IV. JULY-AUGUST

Notes on the Classification of Stellar Spectra (with Plates III to V) *K. O. Wright* 129
A Theoretical Hertzsprung—Russell Diagram for Red Dwarf Stars *J. B. Oke* 135
The Variable Spectrum of the Star H.D. 218393 *Ian Halliday* 149
Review of Publications (*A Concise History of Astronomy* by Peter Doig; *Kleine Raketenkünde* by Hans K. Kaiser: *J.F.H.*; *Pocket Encyclopedia of Atomic Energy* by Frank Gaynor: *F.S.H.*) 158
Out of Old Books (Kirkwood's Gaps in Asteroid Orbits) *Helen Sawyer Hogg* 163
Meetings of the Society—Edmonton 167

V. SEPTEMBER-OCTOBER

Chubb Crater, Ungava, Quebec (with Plates VI to X) *V. B. Meen* 169
Dedication of the "Brydon" Telescope *Elmed Williams* 181
Microhardness Testing of Iron Meteorites (with Plate XI) *F. K. Dalton* 185
Out of Old Books (The Constellations) *Helen Sawyer Hogg* 196
Review of Publications (*The Planet Mars* by Gerard Vaucouleurs: *F.S.H.*; *The Star Almanac for Land Surveyors for the Year 1951* by H.M. Nautical Almanac Office: *J.F.H.*) 202
Meetings of the Society—Edmonton, Victoria, Ottawa 204

VI. NOVEMBER-DECEMBER

Meteoric Ionization (with Plates XII to XVI) *Peter M. Millman* 209
The Atmospheres of the Early Type Stars (with Plates XVII to IX) *C. S. Beals* 221
Out of Old Books (Blue Sun) *Helen Sawyer Hogg* 241
Review of Publications (*Sterne und Sternsysteme* by Wilhelm Becker: *W. R. Hossack*) 246
Notes and Queries (Obituary: Mr. Charles E. Apgar: *F.S.H.*) 247
Meetings of the Society—Ottawa, Toronto 248
Index to Volume XLIV 255
Table of Contents to Volume XLIV i-iv